

# BOREHOLE LOG

Project Name: VANDENBERG AFB IRP: OU 2, Site 20, Landfill 1/Drum Disposal Site 1		
Project Number: 01K78601	Borehole No.: 20-MW-19	Sheet 1 of 3
Borehole Location: 2100133.99 N, 5803002.17 E		Elevation and Datum: 446.09 feet MSL
Drilling Contractor: Tri-County Drilling, Inc.	Date Started: 05/27/98	Date Ended: 05/27/98
Drilling Equipment: CME-75	Total Depth: 90 feet	Groundwater Depth: NA
Drilling Method: Hollow Stem Auger	Sampling Method: Split Spoon	Borehole Diameter: 8 inches
Driller: M. Ferguson	Borehole Abandonment: Reamed with 11" auger and completed as 4" monitoring well	
Hammer Information: Manual Hammer: 140-lb and 30-inch drop	Logged By: D. Peeler	Checked By: M. Anderson

Depth (feet)	Lithologic Description	Symbol	USCS	Sample	Sample Number	Blow Counts	Field OVA (ppm)	Remarks
	SILTY CLAY, very pale brown (10YR 8/2), dry, loose, with fine sand (10%).		ML/CL				0	
	Same as above, dark grayish brown (10YR 4/2), slightly moist, hard chips to 1" long with loose powder, nonplastic.		ML/CL					
5	Same as above, very pale brown (10YR 8/2), dry, with trace angular gravel.		CL				0	
	SANDY CLAY, light olive brown (2.5Y 5/3), dry, hard with loose powder, nonplastic, with sand-size rock fragments (25%) and trace shale gravel.		CL					
10	Same as above, dry to slightly moist, mostly firm, sandy clay chips with some loose silty sand and increasing gravel (10%).		CL				0	Hard drilling.
	Same as above, pale olive (5Y 6/3) to olive yellow (5Y 6/6), slightly moist, with sand and gravel (20%).		CL					
15	CLAY, dark yellowish brown (10YR 3/4), slightly moist, medium plasticity, with sand-size rock fragments (10%) and trace gravel.		CL				0	
	CLAY, white (5Y 8/1), dry, hard, with sand (5%) and angular shale and chert gravel (5%).		CL					Easier drilling.
20	SANDY CLAY, light olive brown (2.5Y 5/3), slightly moist, hard chips to 1" long with loose powder, nonplastic, with sand-size rock fragments (25%) and trace shale gravel.		CL				0	
	Same as above, soft to firm.		CL					
25	Same as above, dry, soft.		CL					
	CLAY, light yellowish brown (2.5Y 6/4), dry, hard, with sand (10%), and with yellow brown to dark brown, slightly moist clay cores.		CL				0	
30	SANDY CLAY, olive (5Y 4/4), slightly moist, firm, high plasticity, with sand (20%) and fine gravel (20%).		CL					


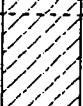

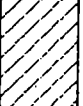

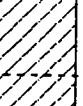

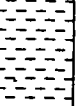
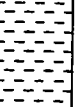
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Sheet 2 of 3

Depth (feet)	Lithologic Description	Symbol	USCS	Sample	Sample Number	Blow Counts	Field OVA (ppm)	Remarks
	Same as above.		CL				0	
35	CLAY, dark yellowish brown (10YR 3/4), moist, soft, high plasticity, with sand (10%) and angular to rounded gravel (10%).		CL				0	
	Same as above, olive brown (2.5Y 4/3), with trace sand and gravel.		CL CL					
40	SILTY CLAY, dark brown (10YR 3/3), slightly moist, soft, medium plasticity, with medium sand-sized angular shale rock fragments (10%) and subangular to rounded fine gravel (10%).						0	
45								
	Same as above, very dark grayish brown (10YR 3/2), low plasticity, with trace sand and gravel.		CL				0	
50	ROCK, very dark grayish brown (10YR 3/2), slightly moist, with trace sand and gravel.		RX				0	Harder drilling. Gradational contact with weathered, fractured rock.
55	Same as above, increasing sand-size angular shale (10%).		RX				0	
60	Same as above, slightly moist to dry, hard, with equal amounts of soft clay chips and olive gray (5Y 4/2), hard, angular to subrounded laminated shale gravel, with trace sand.		RX				0	Very hard drilling. Clay chips and gravel in cuttings brought to surface by spinning the auger in place.
65								
	Same as above, decreasing gravel.		RX				0	Same as above.
70								

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Depth (feet)	Lithologic Description	Symbol	USCS	Sample	Sample Number	Blow Counts	Field OVA (ppm)	Remarks
75	Same as above, slightly moist, firm, nonplastic, with soft to firm clay chips up to 3/4", sand (10%), and fine gravel (10%).	[Symbol: Dashed pattern]	RX				0	Same as above.
80	Same as above, with sand-sized rock fragments (15%) and trace gravel.		RX				0	Same as above.
85							0	
90							0	
95	End of boring at 90 feet below ground surface. Groundwater not encountered. Boring reamed with 11" auger and completed as 4" monitoring well.							
100								
105								
110								